

REMARKS

The Office Action dated June 1, 2006, has been received and carefully noted. The above amendments to the claims and the following remarks are submitted as a full and complete response thereto.

In accordance with the foregoing, claims 1-3, 6-17, 20-23, 26-37, and 40 have been amended to improve clarity of the features recited therein. Although claims 1-3, 6-13, 20-23, 26-33, and 40 are allowed, the proposed amendments to these claims are not intended to alter the scope of the original claims. No new matter is being presented, and approval and entry are respectfully requested.

The Applicants wish to thank the Examiner for indicating allowable subject matter in claims 1-3, 6-13, 20-23, 26-33, and 40.

Claims 1-3, 6-17, 20-23, 26-37 and 40 are pending and under consideration.

REJECTION UNDER 35 U.S.C. § 103:

In the Office Action, at page 2, claims 14-17 and 34-37 were rejected under 35 U.S.C. § 103 as being anticipated by U. S. Patent No. 5,331,637 to Francis et al. ("Francis") in view of U. S. Patent No. 6,778,532 to Akahane et al. ("Akahane"). The rejection is traversed and reconsideration is requested.

Independent claim 14, upon which claims 15-17 are dependent, recites a method for forwarding multicast packets in a network comprising a plurality of routers in a multicast group. The method includes reporting routing tree information from each of the

plurality of routers to other routers of the plurality of routers, receiving a multicast packet at a second router from a first router, the multicast packet comprising control information, wherein a multicast packet is from a selected source and for a selected multicast group, and determining, based at least in part on the control information and the routing tree information reported by the first router, if the multicast packet is to be forwarded by the second router. In response to a positive determination that the multicast packet is to be forwarded, the method forwards the multicast packet from the second router to at least a third router, creates an entry in a multicast forwarding cache, wherein the entry indicates that a multicast packet from the selected source and the selected multicast group is to be forwarded from the second router, and maintains by the second router a multicast packet-forwarding cache. The multicast packet-forwarding cache comprises an entry indicating each multicast packet recently forwarded by the second router.

Independent claim 34, upon which claims 35-37 are dependent, recites an apparatus including a plurality of routers in a multicast group configured to forward multicast packets in a network, wherein each of the plurality of routers reports control information including routing tree information to other routers of the plurality of routers, a first router, a second router, and a third router, wherein the first router comprises a multicast forwarding cache and is configured to receive a multicast packet from the second router in the network, wherein the multicast packet is from a selected source and for a selected multicast group. The first router is configured to determine, based at least

in part, on the control information and the routing tree information reported by the second router to the first router, if the multicast packet is to be forwarded by the first router. The first router, in response to a positive determination that the multicast packet is to be forwarded, is configured to forward the multicast packet to at least the third router. The first router is configured to create an entry indicating that a multicast packet from the selected source and the selected multicast group are to be forwarded after making a positive determination that the multicast packet is to be forwarded. The first router comprises a multicast packet-forwarding cache. The multicast packets forwarding cache comprises an entry indicating each multicast packet recently forwarded by the first router.

As will be discussed below, Francis and Akahane fail to disclose or suggest the elements of any of the presently pending claims.

Regarding the description provided in Francis, this reference generally describes a method for routing multicast packets in a network. All nodes according to Francis maintain a state indicating whether or not they are on a particular multicast tree of each multicast group. See column 7, lines 48-62. Thus, initially, a node r107 is the only node with a state indicating that it is on the multicast tree associated with the aforementioned particular multicast group. As nodes join the multicast group, branches are formed leading from a node currently on the multicast tree to each node joining the group.

Akahane generally describes a high speed multicast route searching method including a means for speeding up a multicast packet route search process during the relay process for a multicast packet, means for applying a two-branch tree searching

method using a Radish algorithm to a multicast route search, and means for applying, to a multicast route searching method, a route searching method which provides the number of node tracing times smaller than the large number of bits of a search key and a short maximum search time.

However, neither Francis or Akahane, individually or combined, teach or suggest, “wherein said second router maintains a multicast packet-forwarding cache, and wherein said multicast packet-forwarding cache includes an entry indicating each multicast packet recently forwarded by said second router,” recited in independent claims 14 and 34. The pending Office Action indicates that such recitations of independent claims 14 and 34 would have been obvious to a person of ordinary skill in the art “as such arrangement is a well known conventional technique in the operation of cache for quick retrieval or fast access to the system data.” However, no evidentiary support is provided showing how the amended recitations of claim 14 and 34 are well known in the art in view of the descriptions of Francis and Akahane.

It is improper to merely deem something obvious without any teaching/suggestion, or the taking of Official Notice. If the U.S. Patent and Trademark Office wishes to take Official Notice that the proposed structural and functional modification is notoriously well known, Applicants respectfully request that supporting evidence be provided. The Federal Circuit has cautioned that an examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed

invention, would select the elements from the cited prior art references for combination in the manner claimed.

If the Examiner wishes to take Official Notice that the proposed claimed feature providing “wherein said second router maintains a multicast packet-forwarding cache, and wherein said multicast packet-forwarding cache includes an entry indicating each multicast packet recently forwarded by said second router” is obvious, it is respectfully requested that supporting evidence be provided. According to MPEP 2144.03, “the examiner may take official notice of facts outside of the record which are capable of instant and unquestionable demonstration as being ‘well-known’ in the art,” emphasis added. However, if the applicant, according to MPEP 2144.03 traverses such an assertion the examiner should cite a reference in support of his or her position. In short, the rules of the U.S. Patent and Trademark Office do not allow discretion on the part of the Examiner. Accordingly, the Applicant respectfully traverses such rejection and requests that either the Examiner must support his assertion with evidence, such as a reference or an Affidavit, or withdraw the rejection.

It is respectfully requested that independent claims 14 and 34 and related dependent claims be allowed.

CONCLUSION:

In view of the above, Applicant respectfully submits that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art.

Applicant further submits that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicant therefore respectfully requests that each of claims 14-17 and 34-37 be found allowable and, along with allowed claims 1-3, 6-17, 20-23, 26-37, and 40, this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the Applicant respectfully petitions for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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